

Abstract of the Disclosure

- A clean room ceiling light fixture formed as a sealed housing with a downwardly-directed light emitting aperture. A heat sink fixed within and spaced from the housing defines a cable raceway inside the housing. A plurality of LEDs are mounted on the heat sink. A high refractive index (polycarbonate) reflector coupled to each LED efficiently directs the LED's light through the aperture into the clean room. The LEDs and/or reflectors can be anti-reflectively coated to improve light transmission efficiency. A refractive index matching compound applied between each LED-reflector pair further improves light transmission efficiency. A spectrally selective filter material prevents ultraviolet illumination of clean rooms used for lithographic processes which are compromised by ultraviolet rays. A holographic diffusion lens and/or variable transmissivity filter can be provided to uniformly distribute the LEDs' light through the aperture. The fixture can be sized and shaped for snap-fit engagement within the H-Bar type clean room ceiling.
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